

Product Brief

XMC4800 Microcontroller

with integrated EtherCAT®

The XMC4800 offers the first EtherCAT® node integrated on an ARM® Cortex®-M controller with on-chip flash and analog/mixed signal capabilities. This unprecedented level of integration offers the EtherCAT® community a new – previously unimaginable – benchmark for ease of implementation.

The XMC4800 enables the most compact designs, eliminating the need for a dedicated EtherCAT® ASIC, external memory and crystal. Designers benefit from BOM cost and PCB space savings.

As a member of the XMC4000 microcontroller family with full pin and code compatibility, the XMC4800 is designed to the same high quality and reliability standards as the rest of the family. XMC4800 enables EtherCAT® applications in harsh environments with 125°C ambient temperatures. In addition, it will be available through 2027 or longer.

Key Features

- EtherCAT® slave, 6 CAN nodes
- ARM® Cortex®-M4 CPU at 144MHz, with up to 2MB flash and 352KB RAM
- Qualified for 125°C automotive temperature range
- Long-term availability through 2027 or longer

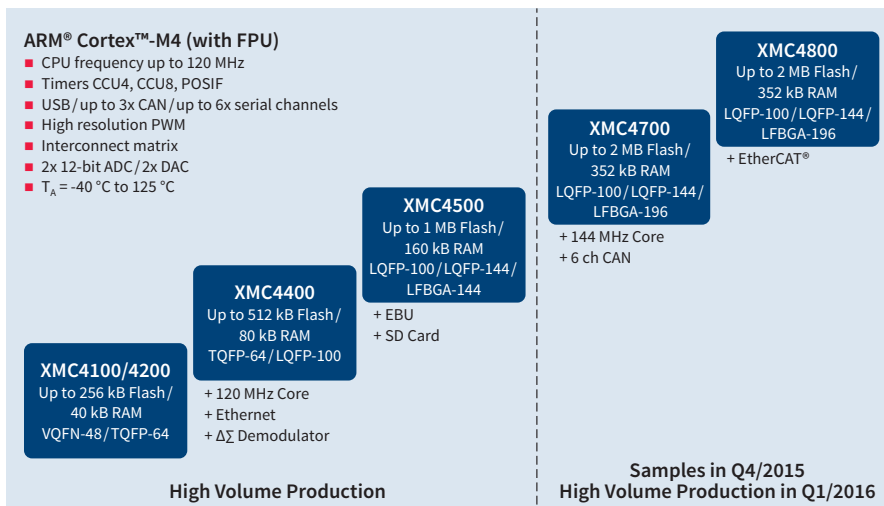
Key Benefits

- Most compact EtherCAT® design – no additional external components required
- Bill of Material (BOM) cost and PCB space savings
- Enablement of EtherCAT® technology in harsh environments with 125°C ambient temperatures

Applications

- Factory automation
- Industrial motor control
- Robotics

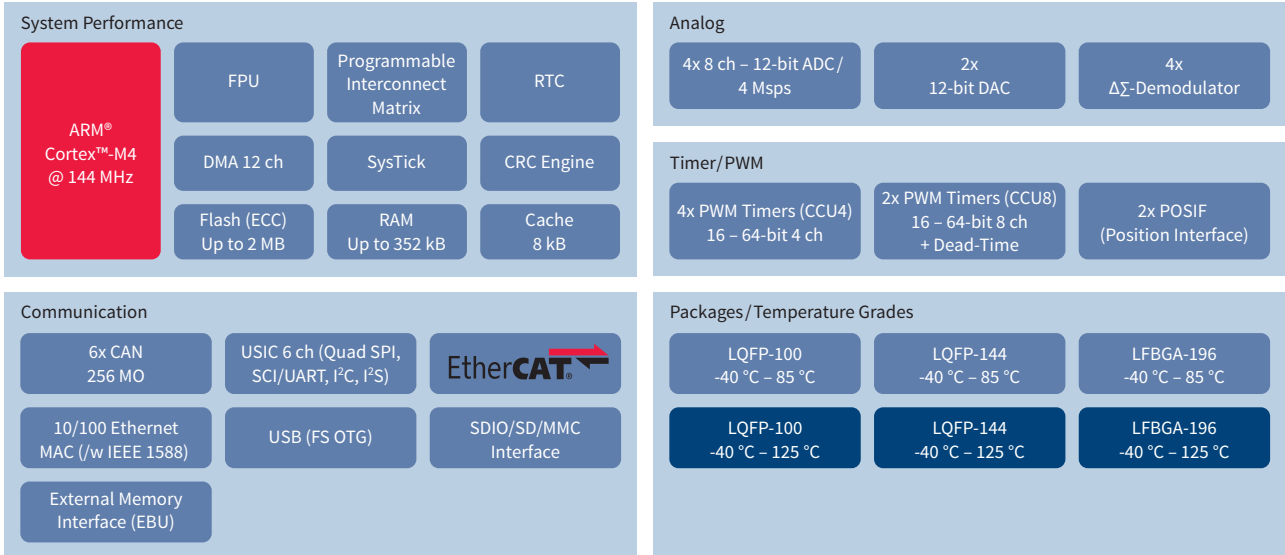
XMC Microcontroller Product Portfolio



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XMC4800 Series Block Diagram



XMC4800 Series Overview

Product Name	Feature Set	Compatibility
XMC4800-F100F1024; LQFP-100 -40°C – 85°C XMC4800-F100K1024; LQFP-100 -40°C – 125°C	EtherCAT®, 1 MB Flash/200 KB RAM, 6 CAN nodes	Pin compatibility with all XMC4000 devices in LQFP-100. Code compatibility with all XMC4000 devices.
XMC4800-F100F1536; LQFP-100 -40°C – 85°C XMC4800-F100K1536; LQFP-100 -40°C – 125°C	EtherCAT®, 1.5 MB Flash/276 KB RAM, 6 CAN nodes	
XMC4800-F100F2048; LQFP-100 -40°C – 85°C XMC4800-F100K2048; LQFP-100 -40°C – 125°C	EtherCAT®, 2 MB Flash/352 KB RAM, 6 CAN nodes	
XMC4800-F144F1024; LQFP-144 -40°C – 85°C XMC4800-F144K1024; LQFP-144 -40°C – 125°C	EtherCAT®, 1 MB Flash/200 KB RAM, 6 CAN nodes	Pin compatibility with all XMC4000 devices in LQFP-144. Code compatibility with all XMC4000 devices.
XMC4800-F144F1536; LQFP-144 -40°C – 85°C XMC4800-F144K1536; LQFP-144 -40°C – 125°C	EtherCAT®, 1.5 MB Flash/276 KB RAM, 6 CAN nodes	
XMC4800-F144F2048; LQFP-144 -40°C – 85°C XMC4800-F144K2048; LQFP-144 -40°C – 125°C	EtherCAT®, 2 MB Flash/352 KB RAM, 6 CAN nodes	
XMC4800-E196F1024; LFBGA-196 -40°C – 85°C XMC4800-E196K1024; LFBGA-196 -40°C – 125°C	EtherCAT®, 1 MB Flash/200 KB RAM, 6 CAN nodes	Upward pin compatibility with all XMC4000 devices in LFBGA-144. Code compatibility with all XMC4000 devices.
XMC4800-E196F1536; LFBGA-196 -40°C – 85°C XMC4800-E196K1536; LFBGA-196 -40°C – 125°C	EtherCAT®, 1.5 MB Flash/276 KB RAM, 6 x CAN Nodes	
XMC4800-E196F2048; LFBGA-196 -40°C – 85°C XMC4800-E196K2048; LFBGA-196 -40°C – 125°C	EtherCAT®, 2 MB Flash/352 KB RAM, 6 x CAN Nodes	

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